

WHAT IS CLAIMED IS:

- A
- 1 1. A call processing method, comprising the steps of:  
2 operating a telephone switch to detect receipt  
3 of an incoming telephone call on a subscriber telephone  
4 line;  
5 in response to detecting an incoming telephone  
6 call on the subscriber telephone line, operating the  
7 telephone switch to transmit a message to a service  
8 control point indicating receipt of a call on the  
9 subscriber telephone line;  
10 operating the service control point to transmit  
11 a message to a first computer in response to the message  
12 transmitted by said telephone switch; and  
13 operating the first computer to select a first  
14 party to service the incoming call.
  - 1 2. The method of claim 1, further comprising:  
2 operating the first computer to determine the  
3 availability of the first party to service the incoming  
4 call by contacting a second computer, the second computer  
5 being associated with the first party.
  - 1 3. The method of claim 2, wherein the second computer  
2 is coupled to a first telephone device by a  
3 communications link which supports computer and telephone  
4 interaction, the step of operating the first computer to  
5 determine the availability of the first party including:

6           obtaining telephone device status information  
7           from the second computer.

1       4.    The method of claim 3, further comprising:  
2            operating the first computer to send call  
3            related information to the second computer.

1       5.    The method of claim 4, further comprising:  
2            operating the first computer to send a first  
3            telephone number corresponding to the first telephone  
4            device to the service control point; and  
5            operating the service control point to instruct  
6            the telephone switch to complete the incoming call using  
7            the first telephone number as the destination telephone  
8            number.

1       6.    The method of claim 5, wherein the first telephone  
2            number is different from a telephone number used to route  
3            the incoming call to said subscriber telephone line.

1       7.    The method of claim 1, further comprising:  
2            operating the first computer to determine from  
3            a second computer if a telephone line associated with the  
4            first party is busy.

1       8.    The method of claim 7, wherein determining from the  
2            second computer if the telephone line is busy includes  
3            using a telephone application programming interface to  
4            obtain telephone line status information.

1 9. The method of claim 7, further comprising:  
2 in response to detecting that said telephone  
3 line is busy:  
4 controlling the second computer to display a  
5 plurality of call disposition options; and  
6 operating the first computer to receive call  
7 disposition selection information from the second  
8 computer system.

1 10. The method of claim 9, wherein the received call  
2 disposition information includes a telephone number to  
3 which the incoming call should be completed, the method  
4 further comprising the step of:  
5 transmitting the received telephone number to  
6 the service control point.

1 11. The method of claim 10, further comprising:  
2 operating the service control point to transmit  
3 the received telephone number to the telephone switch;  
4 and  
5 operating the telephone switch to complete the  
6 call to the telephone line corresponding to the received  
7 telephone number.

1 12. The method of claim 11, the method further  
2 comprising:  
3 transmitting call related data to a third  
4 computer, the third computer being associated with a  
5 party to whom the received telephone number corresponds.

1 13. The method of claim 9, wherein the received call  
2 disposition information includes a telephone number, the  
3 method further comprising:

4 operating the first computer to use the  
5 received telephone number to identify a third computer;  
6 and  
7 transmitting to the third computer call related  
8 data.

1 14. The method of claim 13, further comprising:

2 transmitting the received telephone number to  
3 the service control point;

4 operating the service control point to transmit  
5 the received telephone number to the telephone switch;  
6 and

7 operating the telephone switch to complete the  
8 call to the telephone line corresponding to the received  
9 telephone number.

1 15. A communications system comprising:

2 a telephone switch including trigger circuitry  
3 for detecting calls to a first telephone line on which a  
4 trigger is set, a first telephone number being associated  
5 with the first telephone line;

6 a first subscriber telephone device coupled to  
7 the telephone switch by the first telephone line;

8 a first computer coupled to the first  
9 subscriber telephone device by a communications link  
10 which supports the transmission of TAPI signals between

11 the first computer and the first subscriber telephone  
12 device; and  
13 a second computer system coupled to the  
14 telephone switch and to the first computer, the second  
15 computer including a routine for determining, as a  
16 function of telephone line status information obtained  
17 from the first computer, a telephone number to be used to  
18 complete the routing of calls to the first telephone line  
19 which are detected by said trigger circuitry.

1 16. The system of claim 15, further comprising:  
2 a service control point for coupling the  
3 telephone switch to the second computer system.

1 17. The system of claim 15, where said trigger circuitry  
2 is terminating attempt trigger circuitry.

1 18. The system of claim 17, further comprising:  
2 a first Internet Protocol based computer  
3 network for coupling the first computer to the second  
4 computer.

1 19. The system of claim 18, further comprising:  
2 a second Internet Protocol based computer  
3 network for coupling the second computer to the service  
4 control point; and  
5 wherein the second computer system includes a  
6 routine for controlling the transmission of call related

7 data to the first computer system over said first  
8 Internet Protocol based computer network.

1 20. The system of claim 19, further comprising;  
2 a signaling system seven communications link  
3 for coupling the service control point to said telephone  
4 switch.

1 21. A communications method, comprising:  
2 operating a first computer to contact a second  
3 computer to determine the status of a telephone line  
4 coupled to the second computer system; and  
5 performing a call routing operation as a  
6 function of the determined status of the telephone line  
7 coupled to the second computer system.

1 22. The method of claim 21, wherein performing a call  
2 routing operation includes:  
3 operating the first computer to supply a  
4 telephone number to a service control point; and  
5 routing an incoming call to a telephone line  
6 identified by said telephone number.

1 23. The method of claim 22, wherein routing an incoming  
2 call includes:  
3 operating the service control point to send a  
4 message to a telephone switch to route the incoming call  
5 using said telephone number.

1 24. The method of claim 23, further comprising, prior to  
2 operating the first computer to contact the second  
3 computer:

4 triggering, in response to said incoming call,  
5 a terminating attempt trigger set on a first telephone  
6 service subscriber line corresponding to a service  
7 subscriber telephone number; and

8 contacting the service control point for call  
9 processing instructions in response to triggering of the  
10 terminating attempt trigger.

1 25. The method of claim 24, further comprising, prior to  
2 operating the first computer to contact the second  
3 computer:

4 operating the service control point to transmit  
5 a message including the service subscriber telephone  
6 number to the first computer; and

7 operating the first computer to select a party  
8 to service said incoming call.

1 26. The method of claim 25, wherein the step of  
2 operating the first computer to supply a telephone number  
3 to a service control point includes:

4 selecting as said telephone number to be  
5 supplied to the service control point, a telephone number  
6 corresponding to the party selected to service said  
7 incoming call.